Date=07/09/2020
Lecture By=Arkesh Jaiswal
Subject ⇒ Computer Networking-2

IN PREVIOUS LECTURE **(QUICK RECAP) Date-04/02/2020**	**In Today's Lecture (Overview)**
⇒ What is Computer Network ⇒ Challenges While designing the computer network ⇒ Types Of Networks On The Basis OF How they Are connected On the Basis Of Area they covered =Osi reference Model ⇒ Mcqs	⇒ What is Tcp and Udp ⇒ What is Dns ⇒ What is E-mail? ⇒ What is WWW?? ⇒ Web Architecture Of Web ⇒ Content Delivery Network ⇒ Mcqs ⇒ Questions for self Practice

⇒ What is Tcp and Udp

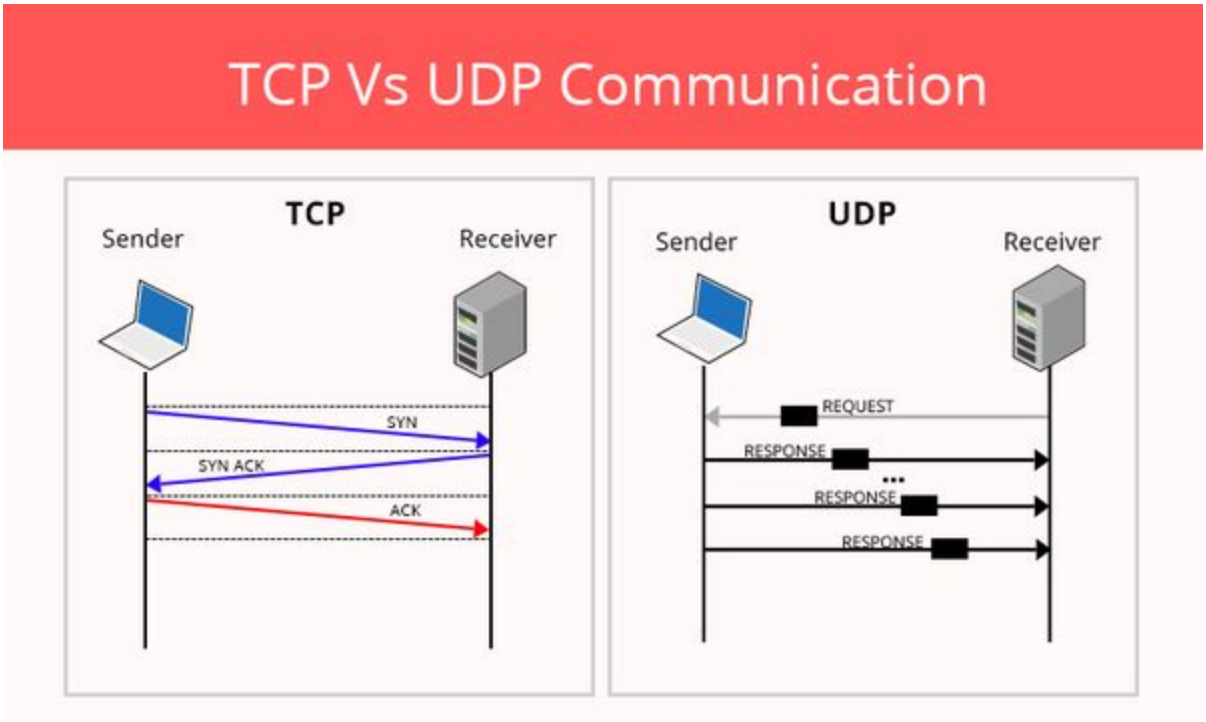
Both TCP (Transmission Control Protocol) and UDP (User Datagram Protocol) are the Internet protocols among which TCP is connection oriented − once a connection is established, data can be sent bidirectional.

UDP is a simpler, connectionless Internet protocol. Multiple messages are sent as packets in chunks using UDP. Now on the basis of features of attributes we can distinguish between TCP and UDP

Following are the important differences between TCP and UDP.

Sr. No.	Key	TCP (Transmission Control Protocol)	UDP (User Datagram Protocol)
1	Definition	It is a communications protocol, using which the data is transmitted between systems over the network. In this, the data is transmitted into the form of packets. It includes error-checking, guarantees the delivery and preserves the order of the data packets.	It is same as the TCP protocol except this doesn’t guarantee the error-checking and data recovery. If you use this protocol, the data will be sent continuously, irrespective of the issues in the receiving end.
2	Design	TCP is a connection oriented protocol.	UDP is a connection less protocol.

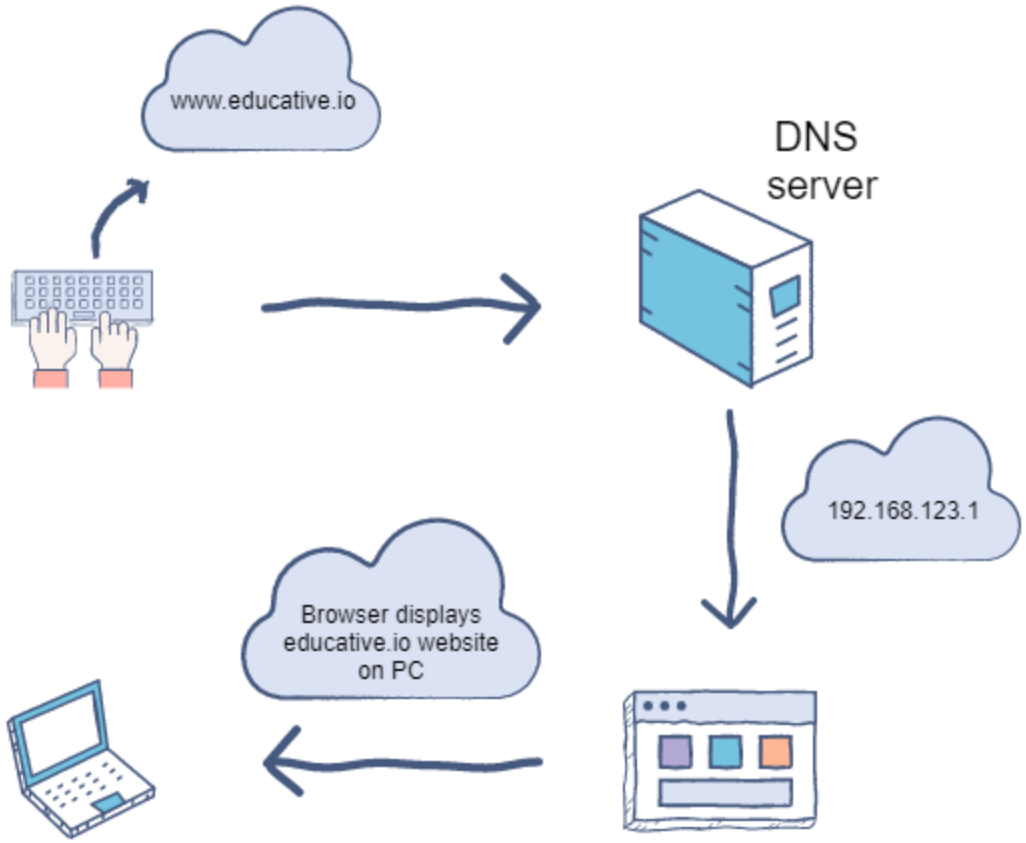
3	Reliable	As TCP provides error checking support and also guarantees delivery of data to the destination router this makes it more reliable as compared to UDP.	While on other hand UDP does provide only basic error checking support using checksum so the delivery of data to the destination cannot be guaranteed in UDP as compared to that in case of TCP.
4	Data transmission	In TCP the data is transmitted in a particular sequence which means that packets arrive in-order at the receiver.	On other hand there is no sequencing of data in UDP in order to implement ordering it has to be managed by the application layer.
5	Performance	TCP is slower and less efficient in performance as compared to UDP. Also TCP is heavy-weight as compared to UDP.	On the other hand UDP is faster and more efficient than TCP.
6	Retransmission	Retransmission of data packets is possible in TCP in case packets get lost or need to resend.	On other hand retransmission of packets is not possible in UDP.



⇒ What is Dns

The Domain Name System (DNS) is the phonebook of the Internet. Humans access information online through domain names, like nytimes.com or espn.com. Web browsers interact through Internet Protocol (IP) addresses. DNS translates domain names to IP addresses so browsers can load Internet resources.

Each device connected to the Internet has a unique IP address which other machines use to find the device. DNS servers eliminate the need for humans to memorize IP addresses such as 192.168.1.1 (in IPv4), or more complex newer alphanumeric IP addresses such as 2400:cb00:2048:1::c629:d7a2 (in IPv6).



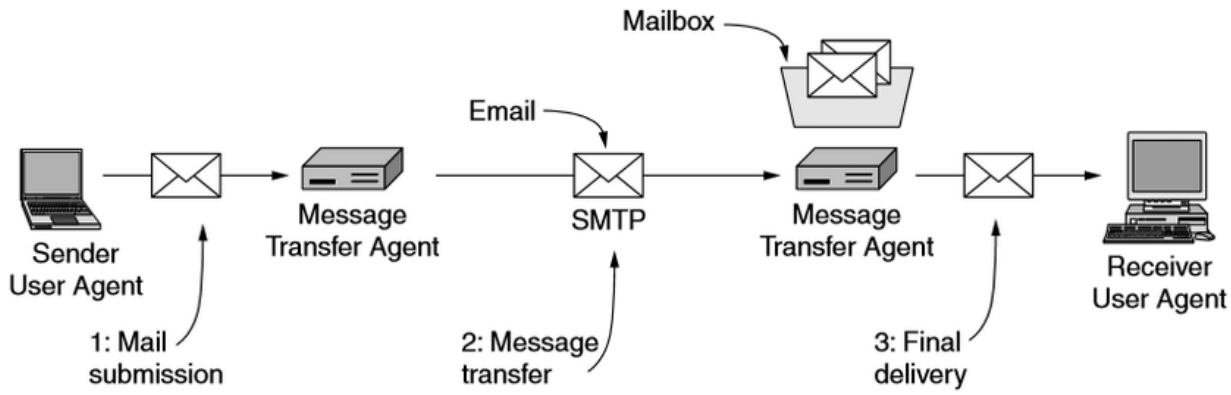
Fun Fact = There are 13 main Dns Servers around the World

⇒ What is E-mail?

Electronic mail is a method of exchanging messages between people using electronic devices. Email entered limited use in the 1960s, but users could only send to users of the same computer, and some early email systems required the author and the recipient to both be online simultaneously, similar to instant messaging.

Category of software	Advantages	Disadvantages
E-mail	• short delivery time • possible expended information transfer • possible multimedia attachments • selectivity and personalization • high efficiency • measurability	• necessity to wait for response • lack of certainty of r of the message • possible anonymity • overload of e-mail m • lack of non-verbal communication

Email Architecture/Process Is Shown below

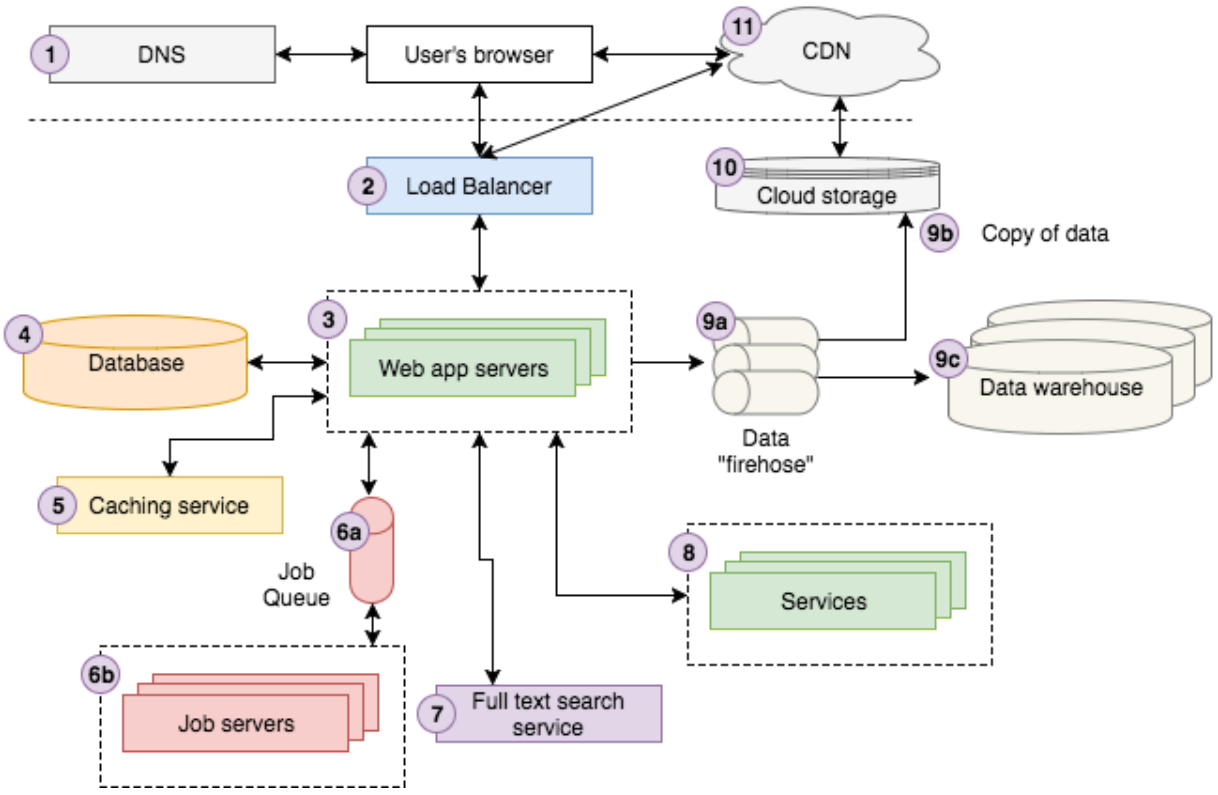


⇒ What is WWW??

World Wide Web, which is also known as a Web, is a collection of websites or web pages stored in web servers and connected to local computers through the internet. These websites contain text pages, digital images, audios, videos, etc. Users can access the content of these sites from any part of the world over the internet using their devices such as computers, laptops, cell phones, etc.

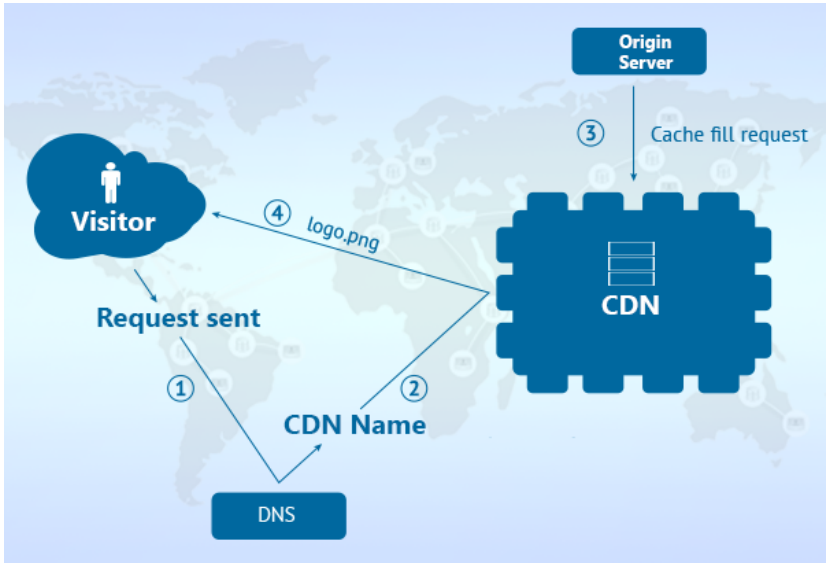
⇒ Web Architecture Of Web

Web architecture is the conceptual structure of the World Wide Web. The WWW or internet is a constantly changing medium that enables communication between different users and the technical interaction (interoperability) between different systems and subsystems.



⇒ Content Delivery Network

A content delivery network, or content distribution network, is a geographically distributed network of proxy servers and their data centers. The goal is to provide high availability and performance by distributing the service spatially relative to end users.



⇒ Mcqs

1.What is www?

A.world wildlife fund

B.world wide web

2.How many total root name servers around the world?

A.13

B.14

C.15

3.What is better for VoIP?

A.TCP

B.UDP

4.What is the full form of DNS?

A.Domain naming system

B.Domain name server

⇒ Questions for self Practice

=Draw the 7 layer OSI Model
=Explain the working of a CDN with diagrams